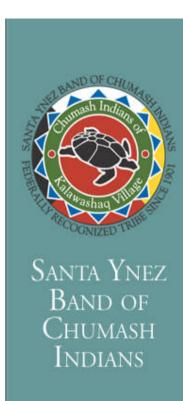


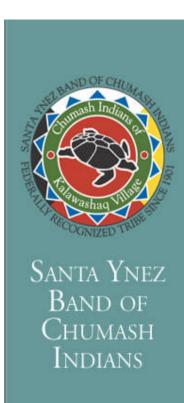
Greening the Chumash Casino Resort

Presented By:
Josh Simmons
Environmental Manager
Santa Ynez Band of Chumash Indians
October 23, 2008



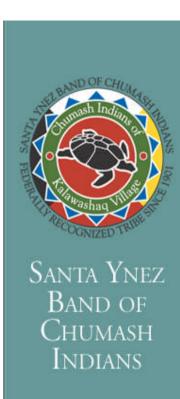
Presentation Outline

- Benefits of Greening
- General Strategies
- Water Efficiency
- Energy Efficiency
- Green Cleaning
- Waste Management
- Transportation
- Renewable Energy



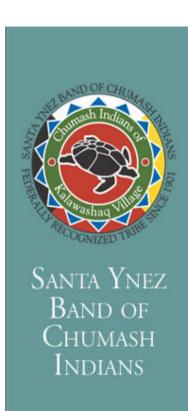
Benefits of Greening

- \$\$\$
- Safer, Healthier Workplace
- Increased Productivity
- Increased Efficiency
- Positive PR
- Green Marketing
- Reduced Environmental Impacts
- Warm, Fuzzy Feeling



General Greening Strategies

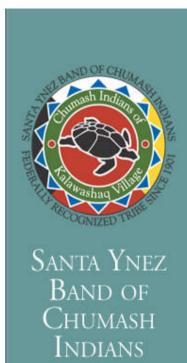
- Develop P2 Policies & Strategies
 - Operations & Decision-Making
 - Marketing & PR
- Calculate Environmental Footprint
 - Energy, Water, Waste Audits; EMS
 - Carbon Footprint
- Governmental P2
- Residential P2
- Identify & Utilize Tribal P2 Resources
 - www.tribalp2.org
 - Agencies and Tribes



Water Efficiency

- Tribal WWTP
 - Parking Structure Stormwater Collection

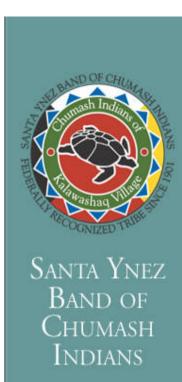




Water Efficiency

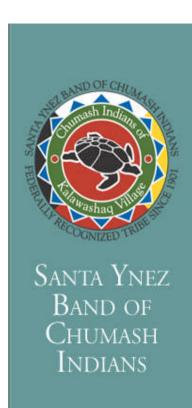
- Tribal WWTP
- Drip, Greywater Irrigation
- Landscaping: native, low-water plants
- Low Flow Toilets & Showerheads
- Waterless Urinals





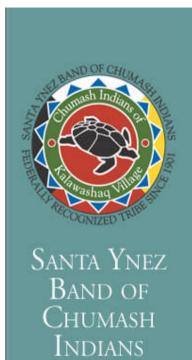
- Variable Frequency Drives (VFDs)
 - Chilled Water Pumps (primary, secondary, return)
 - Hot Water Pumps / Boilers
 - Condenser Fans
 - Air Ventilation
 - Water Features Pumps





- Variable Frequency Drives (VFDs)
- Metering, Software, and Controls

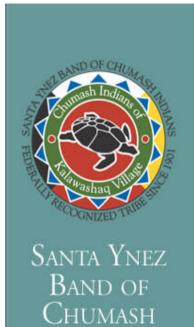




- Variable Frequency Drives
- Metering, Software, and Controls
- Air Hand Dryers
 - \$109k annual savings (0.45 yr)







Indians

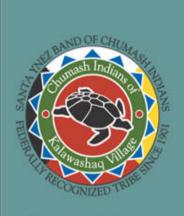
Energy Efficiency

- Variable Frequency Drives
- Metering, Software, and Controls

Air Hand Dryers

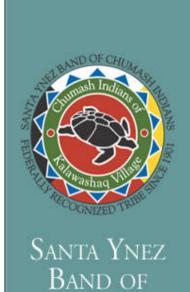
• Light Bulbs – CFLs and LEDs





- Variable Frequency Drives
- Metering, Software, and Controls
- Air Hand Dryers
- Light Bulbs CFLs and LEDs
 - Slot Machines LED Retrofit:
 - \$2,261 annual savings (0.62 yr)

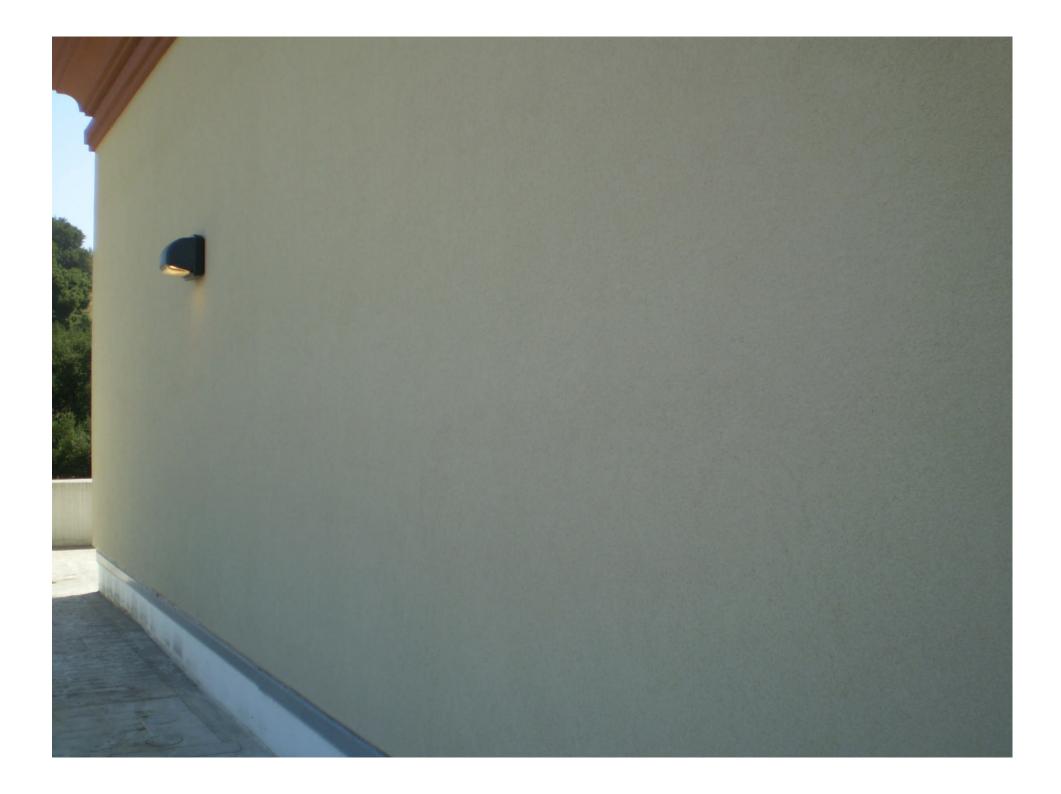


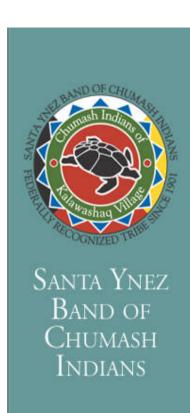


Chumash

Indians

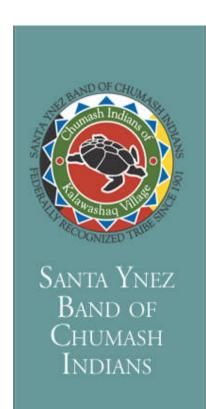
- Variable Frequency Drives
- Metering, Software, and Controls
- Air Hand Dryers
- Light Bulbs CFLs and LEDs
- Building Shell
 - Grivit
 - Reflective Firestone EPDM liner





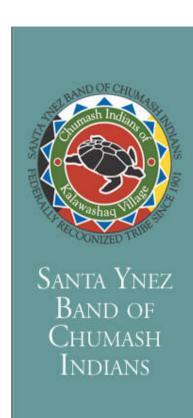
Green Seal Certified Cleaners





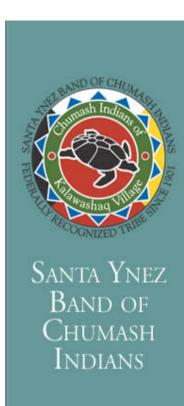
- Green Seal Certified Cleaners
- Systematic Cleaning Chemical Management





- Green Seal Certified Cleaners
- Systematic Cleaning Chemical Management
- Microfiber Mops
- Automated Escalator Cleaners

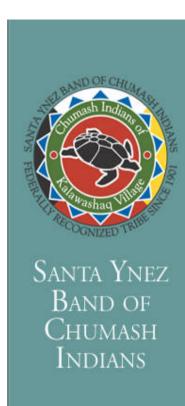




- Green Seal Certified Cleaners
- Systematic Cleaning Chemical Management
- Microfiber Mops
- Automated Escalator Cleaners
- Air Scrubber
- Battery Operated Cleaning Equipment







- Green Seal Certified Cleaners
- Systematic Cleaning Chemical Management
- Microfiber Mops
- Automated Escalator Cleaners
- Air Scrubber
- Battery Operated Cleaning Equipment
- Chip Cleaning











- Waste Management & Recycling
 - Source and Offsite Separation and Recycling





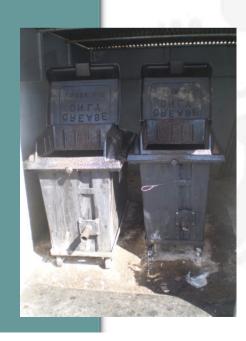
- Waste Management & Recycling
 - Source and Offsite Separation and Recycling
 - Composting





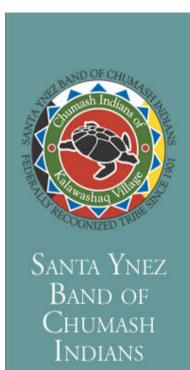


- Waste Management & Recycling
 - Source and Offsite Separation and Recycling
 - Composting
 - Kitchen FOG Management



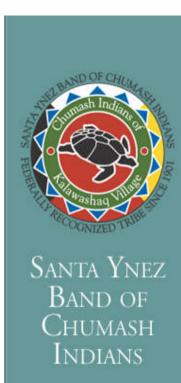




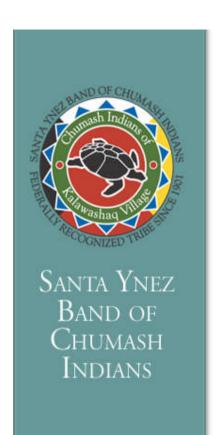


- Waste Management & Recycling
- Green Purchasing
- Pallet / Packaging Reuse



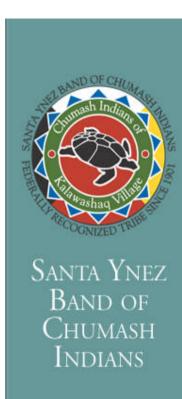


- Waste Management & Recycling
- Green Purchasing
- Pallet / Packaging Reuse
- Office Waste Management
 - Paperless Records
 - Recycled Content Paper
 - Double Sided Printing

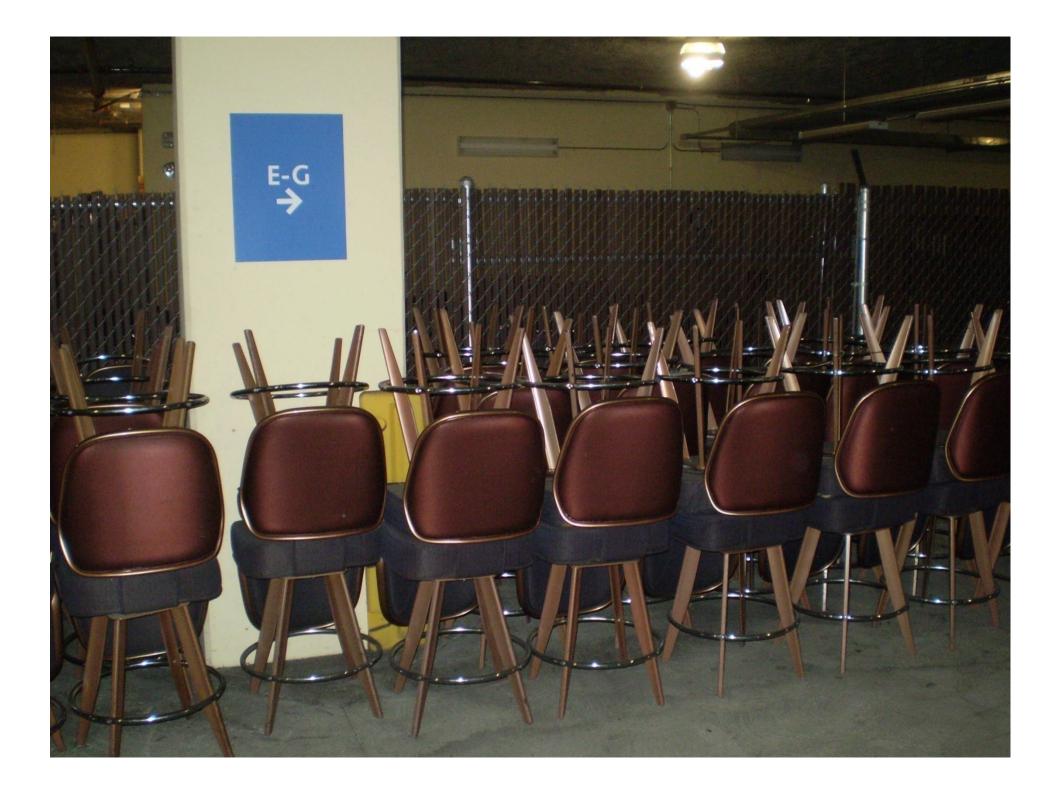


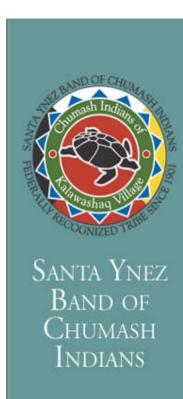
- Waste Management & Recycling
- Green Purchasing
- Pallet / Packaging Reuse
- Office Waste Management
- Uniform Recycling
- Bulk dispensing of toiletries





- Waste Management & Recycling
- Green Purchasing
- Pallet / Packaging Reuse
- Office Waste Management
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- Bulk dispensing of toiletries
- Furniture Donations
- In-House Furniture Upholstering





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- Bulk dispensing of toiletries
- Furniture Donations
- In-House Furniture Upholstering
- Sectional Carpeting







Transportation

- Customer & Employee Shuttle Buses
 - Reduced approximately 800,000 car trips in 2007

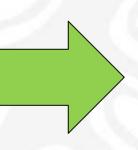




Transportation

- Customer & Employee Shuttle Buses
- Biodiesel

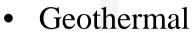








Renewable Energy



- Wind
- Solar





Renewable Energy

- Geothermal
- Wind
- Solar
 - Hotel Roof
 - \$48k (4.9 yr payback)
 - Self Parking
 - \$60k (6.9 yr payback)
 - Valet Parking
 - \$45k (6.9 yr payback)
 - Casino Roof
 - \$52k (9.0 yr payback)





Thank You

Questions?

Josh Simmons

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Cell: (805) 245-9922

Fax: (805) 686-9578

jsimmons@santaynezchumash.org